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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Peter Alan SMITH )  
 SERIAL NO: 09/622,249 ) Group Art Unit: 3635  
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 TITLE: CHAIR INCORPORATING AIR CUSHIONS

THE ASSISTANT COMMISSIONER FOR PATENTS  
 Washington, D.C. 20231

CLEAN VERSION OF CLAIMS

*PUB 1/21/02*

1. A chair of a type having a seat portion and a backrest portion, the chair comprising a seat support structure, a backrest support structure, at least one air-containing cushion positioned on the seat support structure, at least one air-containing cushion secured to the backrest support structure, a layer of compressible material overlaying the cushions, and an upholstery material covering the layer of compressible material; each cushion comprising a bladder which is formed from a pliable, gas impermeable material and each bladder being charged with air in an amount not greater than 60% of the maximum contained volume of the bladder whereby the air may freely be displaced within the bladder, and wherein each bladder underlies entirely that respective part of a person adjacent to the seat and backrest when occupying the chair, as a consequence of which shaping may be imparted to the cushion to complement the person's shape.
2. The chair as claimed in claim 1 wherein each bladder is charged with air in an amount not greater than 50% of the maximum contained volume of the bladder.
3. The chair as claimed in claim 1 wherein each bladder is charged with air in an amount between 15% and 30% of the maximum contained volume of the bladder.
4. The chair as claimed in claim 1 wherein respective ones of the bladders are charged with air to different levels falling within the range 15% to 60% of the maximum contained volume of the respective bladders.
5. The chair as claimed in any one of claims 1 to 4 wherein each bladder is provided with a valve through which air is admitted to the bladder.

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6. The chair as claimed in any one of claims 1 to 4 wherein each bladder has a front wall, a back wall and peripheral side walls whereby the bladder would assume a generally oblong shape if it were charged with air in an amount equal to the maximum contained volume of the bladder.

7. The chair as claimed in any one of claims 1 to 4 wherein the compressible material that overlays the cushions comprises an expanded foam plastics material sheet.

8. The chair as claimed in any one of claims 1 to 4 wherein two of the air-containing cushions are secured to the backrest support structure, one above the other.

9. The chair as claimed in claim 8 wherein an upper one of the backrest support structure cushions overlaps the lower one of the backrest support cushions, and wherein the lower one of the backrest support cushions overlaps the cushion that is positioned on the seat support structure.

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10. The chair as claimed in claim 9 wherein the upper one of the backrest support cushions extends over and around an upper edge of the backrest portion of the chair.

11. The chair as claimed in any one of claims 1 to 4 wherein an underlay which is formed from an expanded foam sheet material is located below the air-containing cushions.

12. The chair as claimed in claim 11 wherein the underlay is formed from a material that has a higher density than that of the compressible material that overlays the cushions.

13. The chair as claimed in any one of claims 1 to 4 wherein the upholstery material is composed of a semi-permeable or vapour-permeable plastics sheet material.

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14. The chair as claimed in any one of claims 1 to 4 wherein the backrest support structure is pivotably mounted with respect to the seat support structure.

15. The chair as claimed in any one of claims 1 to 4 wherein the seat support structure is mounted to a support base which is carried by wheels.

16. The chair as claimed in claim 15 wherein the seat support structure is pivotably mounted with respect to the support base.

17. The chair as claimed in any one of claims 1 to 4 wherein a leg support portion is pivotably mounted with respect to the seat portion and wherein an air-containing

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cushion is mounted to the leg support portion and is overlayed by both the compressible material and the upholstery material.

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18. The chair as claimed in any one of claims 1 to 4 wherein the seat support structure and the backrest support structure are formed as metal frames and wherein the metal frames carry reinforced plastics sheet material which support, either directly or indirectly, the air-containing cushions.

19. The chair as claimed in any one of claims 1 to 4 wherein the cushions are removably secured to the seat and backrest support structures by way of self-sealing fastening materials.

20. The chair as claimed in any one of claims 1 to 4 wherein the upholstery material is secured in place by the use of self-sealing fastening materials.

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